

**REMARKS:**

**REASONS THIS AMENDMENT SHOULD BE ENTERED**

The applicants have amended the claims to adopt Examiner suggestions expressly set forth in the Previous Office action and to put the claims in allowable form. As such,  
5 entry of these amendments is proper under 37 CFR 1.116(b) & (c).

**CLAIM OBJECTIONS**

The Examiner objected to claim 6 on the grounds that there is insufficient antecedent basis for "said two walls". To expedite prosecution, the Applicants have canceled claim 6 and incorporated the features of claim 6 into new claim 21 without the word "said"  
10 before "two walls". The Applicants submit that the above-referenced amendment merely makes explicit that which was implicit in claim 6 as originally filed. As such, these amendments do not narrow any limitations of these claims within the meaning of *Festo Corp. v. Shoketsu Kogyo Kabushiki Co., Ltd.*, 234 F3d 558, 566, 56 U.S.P.Q.2d 1865 (Fed. Cir. 2000), 535 U.S. 722, 152 L. Ed. 2d 944, 122 S. Ct. 1831, (US Supreme  
15 Court 2002) (hereinafter *Festo*).

**CLAIM REJECTIONS**

**35 USC 112**

The Examiner has rejected claims 10 and 17, under 35 U.S.C. 112. To expedite prosecution, the applicants have canceled claim 17. The applicants submit that the  
20 rejection of claim 17 is, therefore, moot. With respect to claim 10, the Examiner has objected to the limitations "of each diode" and "the well shape cavity" as lacking sufficient antecedent basis. To expedite prosecution, the applicants have amended claim 10 to recite "of the diode". Furthermore, claim 10 has been rewritten to depend from claim 5, which recites the "well shape cavity" (see line 11). As such, the  
25 applicants submit that claim 10, as it presently stands in the application, is no longer indefinite.

The Applicants submit that the above-referenced amendments to claim 10 merely makes explicit that which was implicit in the claims as originally filed. As such, these amendments do not narrow any limitations of these claims within the meaning of *Festo*.

35 USC 103

Claims 1-4, 8, 9 and 11 were rejected under 35 U.S.C. §103, as being obvious over US Patent 5,365,102 to Mehrotra et al. (hereinafter, Mehrotra). The Examiner states that Mehrotra teaches a parallel plate diode, comprising metal electrodes, semiconductor material contacting the metal electrodes and a plurality of recesses in one of the metal electrodes, wherein the recesses are in a surface contacting the semiconductor material. The Examiner admits that Mehrotra does not explicitly teach that the concentration of carriers in the semiconductor material is 20% or less than that of the electrons in the metal. The Examiner argues that the device taught by Mehrotra would have inherently had this feature since the material is identical to that of the claimed invention.

To expedite prosecution, the applicants have canceled claims 1-4 and 11. Therefore, the rejections of claims 1-4 and 11 are moot. Furthermore, the applicants have rewritten claim 5 in independent form including the limitations of intervening claim 2. In addition, the applicants have rewritten claims 12 and 13 in independent form. The Examiner had indicated that claims 5, and 12 and 13 would be allowable if rewritten in independent form. The applicants have not included the features of claim 11 in claim 12. However, the applicants submit that claim 12 is allowable as amended since Mehrotra neither teaches nor suggests well-shape cavities of the two electrodes having identical structures so that they can be joined together to form a parallel plate diode in series, as set forth in claim 12. As such claims 5, 12 and 13 define an invention suitable for patent protection. The Applicants submit that the above-referenced amendments to claims 12 and 13 merely make explicit that which was implicit in the claims as originally filed. As such, these amendments do not narrow any limitations of these claims within the meaning of *Festo*.

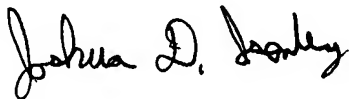
The Applicant submits that claims 8-10 depend, either directly or indirectly from claim 5 and recite additional features therefor. In addition claims 14 and 15 depend from claim 13 and recite additional features therefor. Furthermore, newly added claims 19-21 depend from claim 5 and recite the additional features formerly in claims 3, 4 and 6. In addition, newly added claim 22 depends directly from claim 5, 12 or 13 and recites

additional features formerly in claim 11. Therefore, for the reasons set forth above, these dependent claims define an invention suitable for patent protection.

CONCLUSION

For the reasons set forth above, the Applicant submits that all claims are allowable over the cited art and define an invention suitable for patent protection. Furthermore, for the reasons set forth above, the Applicant submits that the claims are enabled and are neither vague nor indefinite. The Applicants therefore respectfully request that the Examiner enter the amendment, reconsider the application, and issue a Notice of Allowance in the next Office Action.

Respectfully submitted,



Joshua D. Isenberg  
Reg. No. 41,088  
Patent Agent

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JDI PATENT  
204 Castro Lane  
Fremont, CA 94539  
tel.: (510) 896-8328  
fax.: (510) 360-9656